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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,597	12/21/2004	Gerard Laslaz	22131-00015-US	2632
30678 7590 06/08/2007 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20036			EXAMINER MORILLO, JANELLE COMBS	
			ART UNIT 1742	PAPER NUMBER
			MAIL DATE 06/08/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/518,597	<b>Applicant(s)</b> LASLAZ ET AL.	
	<b>Examiner</b> Janelle Combs-Morillo	<b>Art Unit</b> 1742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 April 2007 and 27 April 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-8, 10-13, 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 57-054244A (JP'244).

JP'244 teaches an aluminum casting part with increased creep resistance (abstract) formed from aluminum alloy with 8.5-11.5% Si, 0.2-1.5% Mg, 0.5-4.0% Cu, 0.1-0.3% Zr, 0.05-0.15% Ti, which overlaps or touches the boundary of the presently claimed ranges of Si, Mg, Cu, Ti, Zr, Fe, Mn, Zn, and Ni of claims 1, 4, 5, 7, 8, 10, 11, 15-19). JP'244 further teaches the addition of 0.1-0.2 Zr increases the hot creep resistance of the alloy (abstract). Because JP'244 teaches an overlapping alloy composition, it is held that JP'244 has created a prima facie case of obviousness of the presently claimed invention.

Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05. It would have been obvious to one of ordinary skill in the art to select any portion of the range, including the claimed range, from the broader range disclosed in the prior art, because the prior art finds that said composition in the entire disclosed range has a suitable utility. Additionally, "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage

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ranges is the optimum combination of percentages," In re Peterson, 65 USPQ2d at 1379 (CAFC 2003).

Concerning the equation in claims 6 and 20, JP'244 teaches ranges of Mg and Cu that meet said limitation.

Concerning product by process claim 12, JP'244 does not mention (in the translated parts) the heat treatment temper applied to said Al-Si alloy. However, it would have been obvious to one of ordinary skill in the art to apply a peak strength T6 type temper to the alloy taught by JP'244 because said alloy is used for high strength manufacturing parts such as a diesel engine (abstract).

Concerning product claim 13, because JP'244 teaches said alloy is used for high strength manufacturing parts, it would have been obvious to one of ordinary skill in the art to cast the alloy taught by JP'244 into a cylinder head or crankcase, substantially as presently claimed.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over SU 348633A (SU'633).

SU'633 teaches an aluminum casting part with good strength properties (abstract) formed from aluminum alloy with 6-8% Si, 0.5-0.9% Mg, 0.3-0.7% Cu, 0.05-0.2% Zr, 0.1-0.2% Ti, 0.1-0.2% Mn, which overlaps or touches the boundary of the presently claimed ranges of Si, Mg, Cu, Ti, Zr, Fe, Mn, Zn, and Ni of claims 1-5, 7-11, 14-19). Because SU'633 teaches an overlapping alloy composition, it is held that SU'633 has created a prima facie case of obviousness of the presently claimed invention.

Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05. It would have been obvious to one of ordinary skill in the art to select any portion of the

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range, including the claimed range, from the broader range disclosed in the prior art, because the prior art finds that said composition in the entire disclosed range has a suitable utility.

Additionally, "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages," In re Peterson, 65 USPQ2d at 1379 (CAFC 2003).

Concerning the equation in claims 6 and 20, SU'633 teaches ranges of Mg and Cu that meet said limitation.

Concerning product by process claim 12, SU'633 does not mention (in the translated parts) the heat treatment temper applied to said Al-Si alloy. However, it would have been obvious to one of ordinary skill in the art to apply a peak strength T6 type temper to the alloy taught by SU'633 because said alloy is used for high strength manufacturing parts such as a diesel engine (abstract).

Concerning product claim 13, because SU'633 teaches said alloy is used for high strength heavy duty machinery body castings, it would have been obvious to one of ordinary skill in the art to cast the alloy taught by SU'633 into a cylinder head or crankcase, substantially as presently claimed.

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dulin (US 2,821,495A).

Dulin teaches an aluminum casting part with good strength properties (column 1 lines 14-17) formed from aluminum alloy with 5-10% Si, 0.25-0.6% Mg, 0.1-1.5% Cu, 0.01-1% of one or more of Zr, Ti, and Mn (column 2 lines 31-40), which overlaps or touches the boundary of the

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presently claimed ranges of Si, Mg, Cu, Ti, Zr, Fe, Mn, Zn, and Ni of claims 1-5, 7-11, 14-19).

Because Dulin teaches an overlapping alloy composition, it is held that Dulin has created a prima facie case of obviousness of the presently claimed invention.

Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05.

Concerning the equation in claims 6 and 20, Dulin teaches ranges of Mg and Cu that meet said limitation.

Concerning product by process claim 12, Dulin teaches a solution heating, quenching, and artificially aging heat treatment temper applied to said Al-Si alloy (column 2 lines 41-63), which qualifies as a peak strength T6 type temper.

Concerning product claim 13, because Dulin teaches said alloy is used for high strength structural component castings (column 4 lines 16-17), it would have been obvious to one of ordinary skill in the art to cast the alloy taught by Dulin into a cylinder head or crankcase, substantially as presently claimed.

### ***Response to Arguments***

5. In the response filed on April 6, 2007, applicant submitted an unsigned declaration and various arguments traversing the rejections of record. In the subsequent response filed 4/27/2007 applicant submitted a signed declaration.

6. The declaration under 37 CFR 1.132 filed 4/27/2007 (along with the arguments filed 4/6/2007) is sufficient to overcome the rejection of claims 1-20 based upon FR'927. The

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examiner agrees that FR'927 teaches a range of V outside the instant claims. However, the instant claims are newly rejected as set forth above.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Combs-Morillo whose telephone number is (571) 272-1240. The examiner can normally be reached on 8:30 am- 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCM

June 5, 2007

ROY KING  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700